

Reply to interactive comment #1 on “Spatial distribution of mercury deposition fluxes in Wanshan Hg mining area, Guizhou, China” by Z. H. Dai et al.

D. Wang (Referee)#1

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Comment: This paper investigated the spatial distribution of Hg⁰ in ambient air in Wanshan Hg mining area to identify the major sources of atmospheric mercury. I have no oppositions to the publication of this paper, but ask the authors to consider the following comments.

Reply: We thank you so much for your cordial and patient review for our poorly prepared manuscript. We carefully studied these comments and revised the manuscript. Replies to these comments are listed separately as below.

Comment: 1. Chemical symbol Hg was referred throughout the paper, you should define it at the beginning of the paper. Page 5740 line 3: change ‘Hg’ to ‘mercury (Hg)’.

Reply: We changed the item of ‘Hg’ to ‘mercury (Hg)’ in the revised manuscript.

Comment: 2. Page 5742 line 19: change ‘state’ to ‘states’.

Reply: We changed the item of ‘state’ to ‘states’ in the revised manuscript.

Comment: 3. Page 5743 line 25: change ‘occurred’ to ‘occur’.

Reply: We corrected the item of ‘s occurred’ to ‘occur’.

Comment: 4. Page 5744 line 2: delete the word ‘concentrations’.

Reply: We deleted the word ‘concentrations’.

Comment: 5. Page 5744 line 26: There is a missing space between ‘bottle’ and ‘were’.

Reply: We added a space between ‘bottle’ and ‘were’.

Comment: 6. Page 5746 line 12: change ‘transform’ to ‘transformed’.

Reply: We revised the item ‘transform’ to ‘transformed’ in the revised manuscript.

Comment: 7. Page 5746 line 22: If I am not mistaken there is an omission, and ‘wash-off’ should be changed to ‘washing-off’.

Reply: We changed ‘wash-off’ to ‘washing-off’.

Comment: 8. Page 5748 line 28: change ‘was’ to ‘were’.

Reply: We changed the item ‘was’ to ‘were’ in the revised manuscript.

Comment: 9. Page 5749 line 17: change ‘are’ to ‘is’.

Reply: We changed the item ‘are’ to ‘is’ in the revised manuscript.

Comment: 10. Page 5751 line 5: change ‘is’ to ‘are’.

Reply: We changed the item ‘is’ to ‘are’ in the revised manuscript.

Comment: 11. Page 5751 line 11: change ‘is’ to ‘was’.

Reply: We changed the item ‘is’ to ‘was’.

Comment: 12. Page 5752 line 3: change ‘needs’ to ‘need’.

Reply: We corrected the item ‘needs’ to ‘need’.

Comment: 13. Page 5752 line 16: add ‘et al.,’ after ‘Kocman’.

Reply: We added the item ‘et al.,’ after ‘Kocman’.

Comment: 14. Page 5753 line 13: change ‘concentration’ to ‘concentrations’.

Reply: Indeed, it’s a obviously mistake for mixing the singular and plural formats of the item ‘concentration’ in manuscript. We corrected the item ‘concentration’ to ‘concentrations’ in the revised manuscript.

Comment: 15. Page 5758 line 22: If I am not mistaken, 'Iverfeldt, A.' should be changed to 'Iverfeldt, Å'.

Reply: We corrected the item 'A' to 'Å' in the revised manuscript.

Comment: 16. There are some missing space characters between the authors in the reference. Add space characters after 'Babiarz, C. L.,' (page 5759, line19) and 'Marquez, C.,' (page 5759, line 23).

Reply: We added the missing space in the revised manuscript, and checked other places in the manuscript.

Comment: 17. Page 5759 line 10: add a comma after 'Rea, A. W.'.

Reply: We added a comma after 'Rea, A. W.', and checked other missing comma in 'References'.

Comment: 18. Page 5764: 'Gerald et al. (2006)' is quoted, but it is not found in the references.

Reply: It is really a carelessness of writing the first name here. We corrected 'Gerald et al. (2006)' to 'Keeler et al. (2006)' in the manuscript, and added 'Keeler, G. J, Landis, M. S., Norris, G. A., Christianson, E. M., Dvonch, J. T.: Sources of mercury wet deposition in eastern Ohio, USA, Environ. Sci. Technol., 40, 5874-5881, 2006.' into the part 'References'.

**Reply to interactive comment #2 on “Spatial distribution of mercury deposition
fluxes in Wanshan Hg mining area, Guizhou, China” by Z. H. Dai et al.**

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Comment: The paper is well written and by my opinion, it should be considered for publication with some minor changes. The study is novel and interesting for wider public dealing with Hg pollution, especially as it is performed in China heavy polluted Hg mining area. The article is written regarding to journal standards. The article is clearly laid out and has all the key elements present. The information provided is useful for comparability in regional and global mercury cycling studies by other authors.

Reply: We thank you very much for dedicating your time to read our manuscript and present important issues of the manuscript. We studied the comments carefully and revised the manuscript .

Comment: 1. Please check grammar and spelling as there are some mistyped errors under section 3.4, first paragraph, where authors speak about comparison to Idrija area please use (Idrijca is the river that runs thru Idrija town, where Hg mine is located) : Instead of “Idrijca Hg mining area” use “Idrija Hg mining...”

Reply: We changed the item ‘Idrijca’ to ‘Idrija’ in the manuscript.

Comment: 2. Instead of “in Idrijca in 1999” use “in Idrija in 1999”

Reply: We also changed the item ‘Idrijca’ to ‘Idrija’ in the manuscript.

Comment: 3. Under section 3.4, first paragraph, where authors speak about comparison to Idrija in 1999 a reference is missing (Kotnik, J., Horvat, M., Dizdarevič, T. Current and past mercury distribution in air over the Idrija Hg mine region, Slovenia. Atmos. environ. (1994). 2005, vol. 39, 7570-7579.)

Reply: We added the item ‘(Kotnik et al., 2005)’ into Page 5752 line 13 after the original content ‘with the values reported in Idrija in 1999’, and added the reference ‘Kotnik, J.,

Horvat, M., Dizdarevič, T. Current and past mercury distribution in air over the Idrija Hg mine region, Slovenia. Atmos. environ. (1994), 39, 7570-7579, 2005.' into the part 'References'